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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,234	12/27/2000	Linden Minnick	10559-386001 / P10193	6622
20985	7590	12/19/2005	EXAMINER	
FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			SHAW, PELING ANDY	
			ART UNIT	PAPER NUMBER
			2144	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/750,234	<b>Applicant(s)</b> MINNICK, LINDEN	
	<b>Examiner</b> Peling A. Shaw	<b>Art Unit</b> 2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,14-22 and 24-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-12,14-22 and 24-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Amendment received on 07/25/2005 has been entered. Claims 1, 7, 12, 18, 22, 27 are currently amended. Claims 2, 13, 23 are cancelled. Claim 33 is new. Claims 30-32 are previously presented. Claims 3-6, 8-11, 14-17, 19-21, 24-26, 28-29 are original.
2. The amended change to claim 18 is not supported by the original specification and/or claims. It is not accepted.
3. Claims 1, 3-12, 14-22 and 24-33 are still pending.

### *Priority*

4. This application has no priority claim made. The effective filing date is 12/27/2000.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5-6, 12, 16-17, 22 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Pickreign et al. (US 6732249 B1), hereinafter referred as Pickreign.

- a. Regarding claim 1, Pickreign disclosed a method comprising: allocating space in a host memory for use as a buffer (Figures 1 & 3, column 1 lines 41-56, column 2 lines 5-9); copying all contents of a memory of a network interface controller into the

buffer in response to a first request to read information in the memory of the network interface controller (Figures 1 & 3, column 1 lines 41-56, column 2 lines 5-9, claims 1 and 2); modifying the contents of the network interface controller memory and correspondingly modifying the contents of the buffer (column 4 lines 10-14) and accessing the contents of the buffer to read the information requested in the first request (column 6 lines 46-63, column 7 lines 41-44, claims 1 and 2).

- b. Regarding claim 5, Pickreign disclosed the method according to claim 1 comprising: initializing a physical layer; and subsequently initializing the buffer to store the contents of the network interface controller memory (Figure 3, column 3 lines 50-61, column 6 lines 53-63).
- c. Regarding claim 6, Pickreign disclosed the method according to claim 1 wherein the network interface controller memory comprises an EEPROM (Figure 1, column 1 lines 28-32).
- d. Claims 12, 16-17, 22 and 26 are of the same scope as claims 1 and 5-6. These are rejected for the same reasons as for claims 1 and 5-6.

Pickreign disclosed all limitations of claims 1, 5-6, 12, 16-17, 22 and 26. Claims 1, 5-6, 12, 16-17, 22 and 26 are rejected under 35 U.S.C. 102(e).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

Art Unit: 2144

to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4, 14-15, 24-25 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pickreign et al. (US 6732249 B1), hereinafter referred as Pickreign as applied to claims 1, 12 and 22 above, and further in view of Shah et al. (US 6470397 B1), hereinafter referred as Shah.

- a. Pickreign shows claims 1, 12 and 22 as above. Pickreign does not show (claim 3) further comprising: initializing a device driver in a Network Driver Interface Specification environment to allocate the space in the host memory in less than a second.
- b. Shah shows (claim 3) further comprising: initializing a device driver in a Network Driver Interface Specification environment to allocate the space in the host memory (Figures 3 & 5, column 2 lines 24-37, column 6 lines 12-46) in less than a second (column 7 lines 11-17: Ethernet emulation through multiple enhanced miniport drivers simultaneously) in an analogous art for the purpose of systems and methods for network and I/O device drivers.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Pickreign's functions of host computer virtual memory within a network interface adapter with Shah's functions of network and I/O device drivers.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to meet industrial standard NDIS per Shah's teaching in host and network interface control management per Pickreign and Shah's teaching.

- e. Regarding claim 4, Shah shows comprising: initializing the buffer to store the contents of the network interface controller memory wherein initializing the buffer occurs at a different time from the driver initialization (column 9 lines 64-67, column 10 lines 1-13, column 11 lines 9-22).
- f. Claims 14-15 and 24-25 are of the same scope as claims 3-4. These are rejected for the same reasons as for claims 3-4.
- g. Regarding claim 30, Shah shows wherein correspondingly modifying the contents of the buffer occurs independently of a request by a host to access information in the network interface controller memory (Abstract, column 2 lines 30-37, column 7 lines 27-44).
- h. Claims 31-32 are of the same scope as claim 30. These are rejected for the same reasons as for claim 30.

Together Pickreign and Shah disclosed all limitations of claims 3-4, 14-15, 24-25 and 30-32.

Claims 3-4, 14-15, 24-25 and 30-32 are rejected under 35 U.S.C. 103(a).

7. Claims 7-11, 18-21 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pickreign et al. (US 6732249 B1), hereinafter referred as Pickreign, in view of Sharma et al. (US 6647469 B1), hereinafter referred as Sharma, and Shah et al. (US 6470397 B1), hereinafter referred as Shah.

- a. Pickreign shows (claim 7) a method comprising: copying all contents of a network interface controller memory into a buffer in host memory in response to a request to read information in the network interface controller memory (Figures 1 & 3, column 1 lines 41-56, column 2 lines 5-9, claim 1); and accessing the contents of the buffer to

read the information requested in the request (column 6 lines 46-63, column 7 lines 41-44, claim 1). Pickreign does not show (claim 7) recopying all contents of the network interface controller memory into the buffer if the contents of the network interface controller memory are modified; (claim 8) further comprising: initializing a driver to allocate memory space to the buffer.

- b. Sharma shows (claim 7) recopying all contents of the network interface controller memory into the buffer if the contents of the network interface controller memory are modified (Abstract, column 3 lines 62-64, column 5 lines 1 1-17) in an analogous art for the purpose of using read current transactions for improved performance in directory-based coherent I/O systems.
- c. Shah shows (claim 8) further comprising: initializing a driver to allocate memory space to the buffer (column 6 lines 12-26, column 10 lines 4-13) in an analogous art for the purpose of systems and methods for network and I/O device drivers.
- d. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Pickreign's functions of host computer virtual memory within a network interface adapter with Sharma's functions of read current transactions in coherent I/O systems and Shah's functions of network and I/O device drivers.
- e. The modification would have been obvious because one of ordinary skill in the art would have been motivated to have a coherent view per Sharma's teaching in host and network interface control (I/O) management per Pickreign, Sharma and Shah's teaching.

- f. Regarding claim 9, Shah shows further comprising: initializing the driver in a Network Driver Interface Specification environment (Figures 3 & 5, column 2 lines 24-37, column 6 lines 12-46) in less than a second (column 7 lines 1 1-17: Ethernet emulation through multiple enhanced miniport drivers simultaneously).
- g. Regarding claim 10, Shah shows further comprising: initializing the buffer at a time different from the driver initialization (column 9 lines 64-67, column 10 lines 1-13, column 11 lines 9-22).
- h. Regarding claim 11, Pickreign shows further comprising: initializing the buffer to store the contents of the network interface controller memory in response to a first request to read the contents of the network interface controller memory (Figures 1 & 3, column 1 lines 41-56, column 2 lines 5-9, claims 1 and 2).
- i. Claims 18-21 are of the same scope as claims 7 and 9-11. These are rejected for the same reasons for claims 7 and 9-11.
- j. Claims 27-29 are of the same scope as claims 7, 9 and 11. These are rejected for the same reasons for claims 7, 9 and 11.

Together Pickreign, Sharma and Shah disclosed all limitations of claims 7-11, 18-21 and 27-

29. Claims 7-11, 18-21 and 27-29 are rejected under 35 U.S.C. 103(a).

- 8. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pickreign et al. (US 6732249 B1), hereinafter referred as Pickreign as applied to claim 1 above, and further in view of Sharma et al. (US 6647469 B1).

- a. Pickreign shows claim 1 as above; copying all contents of the memory of the network interface controller into the buffer if the contents have been modified (Figures 1 & 3,



column 1 lines 41-56, column 2 lines 5-9); and accessing the contents of the buffer to read the information requested in the second request (column 6 lines 46-63, column 7 lines 41-44). Pickreign does not show (claim 33) further comprising: determining, in response to a second request to read information in the memory of the network interface controller, whether the contents of the memory of the network interface controller have been modified; copying all contents of the memory of the network interface controller into the buffer if the contents have been modified; and accessing the contents of the buffer to read the information requested in the second request.

- b. Sharma shows (claim 33) further comprising: determining, in response to a second request to read information in the memory of the network interface controller, whether the contents of the memory of the network interface controller have been modified (Abstract, column 3 lines 62-64, column 5 lines 11-17) in an analogous art for the purpose of using read current transactions for improved performance in directory-based coherent I/O systems.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Pickreign's functions of host computer virtual memory within a network interface adapter with Sharma's functions of read current transactions in coherent I/O systems.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to have a coherent view per Sharma's teaching in host and network interface control (I/O) management per Pickreign and Shah's teaching.

Art Unit: 2144

Together Pickreign and Sharma disclosed all limitations of claim 33. Claim 33 is rejected under 35 U.S.C. 103(a).

*Response to Arguments*

9. Applicant's arguments filed on 07/25/2005 have been fully considered, but they are not persuasive.
- a. In response to statements on rejection of claims 1, 7, 12, 22 and 27 under U.S.C. § 103(a), Pickreign discloses a direct memory access to the network interface controller for control and data information exchange as each memory access from host is mapped to a memory access supported by the controller's processor. As the controller is updating its memory image, it also uses registers to update host. Thus, Pickreign shows all limitations of allocating, copying, modifying and accessing per claim 1.
  - b. In response to statements on claim 18, the amended change is not found in the original claims and specification. The amended change is not accepted.
  - c. In response to statements on no suggestion to combine the references, all the references are drawn from closely related arts. One of ordinary skills in the art would be motivated to explore and reason to combine these references as cited above.
  - d. The added claim is examined as above.

*Remarks*

10. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Saxena et al. (US 5893926 A) Data buffering technique in computer system

*Conclusion*

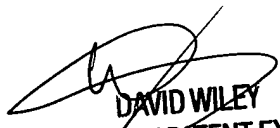
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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